AUTHOR INDEX TO VOLUME 115

Ågren, H., C. Medina Llanos and K.V. Mikkelsen, A self-consistent reaction field approach to liquid photoionization 115 (1987) 43
Alonso, J.L., see R.M. Villamañán 115 (1987) 103
Angeloni, L., see P.F. Fracassi 115 (1987) 169

Bacskay, G.B., see P.L. Cummins 115 (1987) 325
Barclay, V.J., see J.S. Wright 115 (1987) 23
Beijerinck, H.C.W., see F.T.M. van den Berg 115 (1987) 359
Benson, J.M., see A.W. Potts 115 (1987) 253
Billing, G.D., Laser fragmentation of solids 115 (1987) 229
Blake, A.J., see M.H. Palmer 115 (1987) 219
Block, J.H., see S. Jaenicke 115 (1987) 381
Bodeur, S., see A.P. Hitchcock 115 (1987) 93
Bonamy, J., see B. Lavorel 115 (1987) 69
Botter, R., see J. Lemaire 115 (1987) 119
Botter, R., see J. Lemaire 115 (1987) 129
Brede, O., R. Mehnert and W. Naumann, Kinetics of excitation and charge transfer reactions in non-polar media 115 (1987) 279
Brion, C.E., see K.-H. Sze 115 (1987) 433
Brose, K.-H., see R. Kulver 115 (1987) 239
Buenker, R.J., see J.S. Wright 115 (1987) 23
Butcher, V., M.L. Costa, J.M. Dyke, A.R. Ellis and A. Morris, A study of the phenyl radical by vacuum ultraviolet photoelectron spectroscopy 115 (1987) 261

Costa, M.L., see V. Butcher 115 (1987) 261
Cummins, P.L., G.B. Bacskay and N.S. Hush, Ab initio quantum chemical studies of the electronic properties of the hydrogen bonded N_2–HF, N_2–HCl, $(HCN)_2$ and NH_3–HCN complexes 115 (1987) 325

Dacol, D.K., see H. Singh 115 (1987) 339
Dargelos, A., see G. Lespes 115 (1987) 453
De Bruijn, D.P., see W. Koot 115 (1987) 297
De Lange, C.A., see W.J. van der Meer 115 (1987) 109
Defranceschi, M., Theoretical investigations of the momentum densities for molecular hydrogen 115 (1987) 349
Della Valle, R.G., see P.F. Fracassi 115 (1987) 169
Delwiche, J., see B. Leyh 115 (1987) 243
Diercksen, G.H.F., N.E. Grüner, J.R. Sabin and J. Oddershede, The radiative lifetime of the $A\,^1\Pi$ state of BH 115 (1987) 15
Dimicoli, I., see J. Lemaire 115 (1987) 119
Dimicoli, I., see J. Lemaire 115 (1987) 129

Drachsel, W., see S. Jaenicke 115 (1987) 381
Drexhage, K.H., see A. Penzkofer 115 (1987) 143
Dyke, J.M., see V. Butcher 115 (1987) 261
Dykstra, C.E., see S. Liu 115 (1987) 461

Eckhardt, C.J., see R. Kulver 115 (1987) 239
Ellis, A.R., see V. Butcher 115 (1987) 261

Fantoni, R., see M. Snels 115 (1987) 79
Fernandez, J., see G. Lespes 115 (1987) 453
Ferrari, L., Reliability of the usual differential collision operator in describing the relaxation of a heavy-particle flow in a light gas 115 (1987) 187
Fischer, S.F. and P.O.J. Scherer, On the early charge separation and recombination processes in bacterial reaction centers 115 (1987) 151
Fracassi, P.F., L. Angeloni and R.G. Della Valle, Non-perturbative theory of four-wave light scattering in strong fields 115 (1987) 169

Gilchrist, J. le G., Hydroxyls in polyethylene and in alkanes. A low-temperature dielectric relaxation study 115 (1987) 307
Gilchrist, J. le G. and J.K. Vij, Dielectric absorption in hydrocarbon polymers with non-polar additives 115 (1987) 319
Gould, R.O., see M.H. Palmer 115 (1987) 219
Grüner, N.E., see G.H.F. Diercksen 115 (1987) 15

Hitchcock, A.P., S. Bodeur and M. Tronc, Sulfur and chlorine K-shell X-ray absorption spectra of SCl_2, S_2Cl_2,$SOCl_2$ and SO_2Cl_2 115 (1987) 93
Hochstrasser, R.M. and H.P. Trommsdorff, Observation of delocalized states of the proton in carboxylic acid dimers in condensed matter 115 (1987) 1
Hubin-Franskin, M.-J., see B. Leyh 115 (1987) 243
Hush, N.S., see P.L. Cummins 115 (1987) 325

Inokuchi, H., see N. Sato 115 (1987) 269

Jaenicke, S., U. Weigmann, J.R. Pitts, W. Drachsel, J.H. Block and D. Menzel, Field-assisted photodesorption of He, Ne, Ar, Kr and CO ions from W 115 (1987) 381
Jolicard, G., Effective hamiltonian theory: an intermediate representation method for the wave operator calculation 115 (1987) 57
Jordan, K.D., see M.V. Rama Krishna 115 (1987) 405
Jordan, K.D., see M.V. Rama Krishna 115 (1987) 423

Kalcher, J., On the stabilities of the singly and doubly negative atomic ions of Si, P, S, and Cl 115 (1987) 33
Koot, W., W.J. van der Zande and D.P. de Bruijn, Rotational distribution of H_2^+ ions produced by 90 eV electron impact 115 (1987) 297
Kovner, M., see D. Statman 115 (1987) 197
Kuball, H.-G., see A. Schönhofer 115 (1987) 159
Kulver, R., K.-H. Brose and C.J. Eckhardt, Calculation of the elastic constants of phenanthrene crystals 115 (1987) 239

Lami, A. and G. Villani, Tunneling in the presence of fluctuations: the stochastic Liouville equation approach 115 (1987) 391
Lami, A., Enhancement of reactivity through near-resonant radiative excitation of an overtone: model study of an isomerization by hydrogen tunneling 115 (1987) 399
Lavorel, B., G. Millot, J. Bonamy and D. Robert, Study of rotational relaxation fitting laws from calculation of SRS N_2 Q-branch 115 (1987) 69
Lemaire, J., I. Dimicoli, F. Piuzzi and R. Botter, Two-color photoionization spectroscopy of polyatomic molecules and cations: aniline, phenol and phenetole 115 (1987) 119
Lemaire, J., I. Dimicoli and R. Botter, Laser-induced dissociation of phenetole ions prepared by resonance-enhanced two-photon, two-color ionization 115 (1987) 129
Lespes, G., J. Fernandez and A. Dargelos, VUV and photoelectron spectra of methylstannane. Theoretical and experimental approach 115 (1987) 453
Leupacher, W., see A. Penzkofer 115 (1987) 143
Leyh, B., J. Delwiche, M.-J. Hubin-Franskin and I. Nenner, Electronic autoionization in carbon monoxide: the effects of the vibrational motion 115 (1987) 243
Li, J.-M., see K.-H. Sze 115 (1987) 433
Liu, S. and C.E. Dykstra, Sensitivity of monomer nuclear quadrupole coupling constants to hydrogen bond formation 115 (1987) 461
López, J.C., see R.M. Villamañán 115 (1987) 103

Medina Llanos, C., see H. Ågren 115 (1987) 43
Meerts, W.L., see M. Snels 115 (1987) 79
Mehnert, R., see O. Brede 115 (1987) 279
Meier, B., see A. Penzkofer 115 (1987) 143
Menzel, D., see S. Jaenicke 115 (1987) 381
Mikkelsen, K.V., see H. Ågren 115 (1987) 43
Millot, G., see B. Lavorel 115 (1987) 69
Morris, A., see V. Butcher 115 (1987) 261

Naumann, W., see O. Brede 115 (1987) 279
Nenner, I., see B. Leyh 115 (1987) 243
Novak, I., see A.W. Potts 115 (1987) 253

Oddershede, J., see G.H.F. Diercksen 115 (1987) 15

Palmer, M.H., ^{14}N nuclear quadrupole coupling in imidazolium cations. Ab initio studies of urocanic acid, histidinium chloride and imidazolium hydrogen maleate, and comparison with experiment 115 (1987) 207
Palmer, M.H., A.J. Blake and R.O. Gould, ^{14}N nuclear quadrupole coupling in cyclic amides and thioamides. Ab initio simulations of the solid state environment as interpretation of the NQR spectra of 2-pyridinone, isatin and benzothiazole-2-one. A new X-ray structure for isatin 115 (1987) 219
Penzkofer, A., W. Leupacher, B. Meier, B. Runde and K.H. Drexhage, Concentration-dependent absorption and emission behaviour of a pyrimidonecarbocyanine dye in hexafluoroisopropanol 115 (1987) 143
Pitts, J.R., see S. Jaenicke 115 (1987) 381
Piuzzi, F., see J. Lemaire 115 (1987) 119
Potts, A.W., J.M. Benson, I. Novak and W.A. Svensson, Electron correlation effects in the valence shell photoelectron spectra of haloethenes 115 (1987) 253

Purvis, M.H., see H.T. Williams 115 (1987) 7

Rabitz, H., see H. Singh 115 (1987) 339
Rama Krishna, M.V. and K.D. Jordan, An extended-valence MC SCF procedure: determination of the dissociation energies of C_2, N_2, O_2, and F_2 115 (1987) 405
Rama Krishna, M.V. and K.D. Jordan, Theoretical study of the energetics of the $O_3(X\,^1A_1) \rightarrow O_2(X\,^3\Sigma_g^-) + O(^3P)$ dissociation process 115 (1987) 423
Robert, D., see B. Lavorel 115 (1987) 69
Runde, B., see A. Penzkofer 115 (1987) 143

Sabin, J.R., see G.H.F. Diercksen 115 (1987) 15
Sanders, R., see M. Snels 115 (1987) 79
Sato, N., H. Inokuchi and E.A. Silinsh, Reevaluation of electronic polarization energies in organic crystals 115 (1987) 269
Scherer, P.O.J., see S.F. Fischer 115 (1987) 151
Schonenberg, J.H.M., see F.T.M. van den Berg 115 (1987) 359
Schönhofer, A. and H.-G. Kuball, Symmetry properties of the Mueller matrix 115 (1987) 159
Shea, J.C., see D. Statman 115 (1987) 197
Silinsh, E.A., see N. Sato 115 (1987) 269
Simpson, C.J.S.M., see H.T. Williams 115 (1987) 7
Singh, H., D.K. Dacol and H.Rabitz, Atom–molecule scattering with the average wavefunction method 115 (1987) 339
Snels, M., R. Fantoni, R. Sanders and W.L. Meerts, IR dissociation of ammonia clusters 115 (1987) 79
Sobolewski, A.L., On the excess-energy dependence of radiationless decay rate constants 115 (1987) 469
Statman, D., M. Kovner and J.C. Shea, The effects of friction on the electron transfer of 9,10-dicyanoanthracene 115 (1987) 197
Svensson, W.A., see A.W. Potts 115 (1987) 253
Sze, K.-H., C.E. Brion, X.-M. Tong and J.-M. Li, Inner shell excitation of SO_2 by high-energy electron impact: a comparison with multichannel quantum defect theory 115 (1987) 433

Tong, X.-M., see K.-H. Sze 115 (1987) 433
Trommsdorff, H.P., see R.M. Hochstrasser 115 (1987) 1
Tronc, M., see A.P. Hitchcock 115 (1987) 93

Van den Berg, F.T.M., J.H.M. Schonenberg and H.C.W. Beijerinck, Ionisation of small molecules by state-selected $Ne(^3P_0, ^3P_2)$ metastable atoms in the $0.06 < E < 6$ eV energy range 115 (1987) 359
Van der Meer, W.J., P. van der Meulen and C.A. de Lange, HeIα photoionisation cross section determination of Br atoms 115 (1987) 109
Van der Meulen, P., see W.J. van der Meer 115 (1987) 109
Van der Zande, W.J., see W. Koot 115 (1987) 297
Vij, J.K., see J. le G. Gilchrist 115 (1987) 319
Villamañán, R.M., J.C. López and J.L. Alonso, Rotational spectrum and ring-puckering vibration in 2,5-dihydrofuran 115 (1987) 103
Villani, G., see A. Lami 115 (1987) 391

Weigmann, U., see S. Jaenicke 115 (1987) 381
Williams, H.T., M.H. Purvis and C.J.S.M. Simpson, Non-resonant VV transfer in liquid Ar and in the gas phase at 85 K 115 (1987) 7
Wright, J.S., V.J. Barclay and R.J. Buenker, Bond functions in molecular excited states: MRD CI calculations for the $A\,^3\Sigma_u^+$, $B\,^3\Pi_g$ and $W\,^3\Delta_u$ states of N_2 115 (1987) 23

LIST OF SUBJECTS

1 METHODS

1.1 Theoretical

1.1.1 Group theory and algebras
1.1.2 Classical mechanics *
1.1.3 Quantized field theory *
1.1.4 Many body and quasiparticle approaches
1.1.5 Coupling schemes and perturbative treatments
1.1.6 Relativistic quantum mechanics
1.1.7 Transport quantum mechanics
1.1.8 Equilibrium statistical mechanics *
1.1.9 Statistical mechanics of stationary states *
1.1.10 Non-equilibrium thermodynamic and hydrodynamic theories
1.1.11 Ab initio schemes for stationary properties
1.1.12 Computational and simulation methods
1.1.13 Molecular dynamics and scattering theory

1.2 Experimental

1.2.1 Magnetic resonances
1.2.2 Cyclotron resonance *
1.2.3 Microwave spectroscopy
1.2.4 Infrared spectroscopy
1.2.5 Raman spectroscopy
1.2.6 Visible and UV spectroscopy
1.2.7 Fluorescence spectroscopy
1.2.8 Photoelectron and Auger spectroscopy
1.2.9 X-ray spectroscopy
1.2.10 Electron impact spectroscopy
1.2.11 Laser methods
1.2.12 Picosecond spectroscopy *
1.2.13 Non-linear optical spectroscopy *
1.2.14 Synchrotron spectroscopies
1.2.15 Coherent optical spectroscopy *
1.2.16 Optical pumping
1.2.17 Multiple resonance spectroscopy *
1.2.18 Optoacoustic spectroscopy *
1.2.19 Atomic and molecular beam techniques
1.2.20 Time-resolved experiments
1.2.21 Mass spectrometry
1.2.22 Radiolysis
1.2.23 Mössbauer spectroscopy *
1.2.24 X-ray, electron and neutron diffraction
1.2.25 Neutron scattering *
1.2.26 Light scattering *
1.2.27 Field emission and field ionization
1.2.28 Measurement of macroscopic variables

2 OBJECTS

2.1 Bulk systems

2.1.1 Gases
2.1.2 Supersonic beams *
2.1.3 Liquids neat *
2.1.4 Liquid mixtures and solutions
2.1.5 Crystals
2.1.5.1 neat
2.1.5.2 mixed *
2.1.6 Glasses *
2.1.7 Liquid crystals
2.1.8 Polymers
2.1.9 Semiconductors *
2.1.10 Metals and alloys *
2.1.11 Thin films *
2.1.12 Surfaces *
2.1.13 Low-dimensional materials *
2.1.14 Dielectrics
2.1.15 Plasmas *
2.1.16 Biological systems *

2.2 Microscopic systems

2.2.1 Atoms
2.2.2 Molecules (neutral and ionic)
2.2.2.1 diatomic
2.2.2.2 small polyatomics
2.2.2.3 aromatics
2.2.2.4 other large
2.2.2.5 polymeric and biological *
2.2.3 Molecular aggregates
2.2.3.1 dimers
2.2.3.2 van der Waals molecules
2.2.3.3 clusters *
2.2.3.4 complexes *
2.2.4 Free radicals (including hydronium and muonium)
2.2.5 Quasiparticles (including excitons) *
2.2.6 Defects and impurities *
2.2.7 Ions and charge carriers

* Denotes subject not covered in this volume.

3 PHENOMENA

3.1 Molecular structure
3.2 Vibrations and rotations of molecules
3.3 Electronic structure and states
3.4 Electric and magnetic properties
3.5 Spin splittings *
3.6 Optical activity
3.7 Molecular interactions
3.8 Spectral bandshapes and intensities
3.9 Coupling of electronic and nuclear motion
3.10 Energy transfer processes
3.11 Molecular photophysical processes
3.12 Intramolecular dynamics
3.12.1 radiationless transitions *
3.12.2 vibrational energy distribution (including vibrational dissociation)
3.13 Luminescence spectra, yields and lifetimes
3.14 Coherence loss processes *
3.15 Non-linear responses (including optical)
3.16 Multiphoton phenomena *
3.17 Reactions (including dissociation) *
3.17.1 gas phase *
3.17.2 condensed phase *
3.17.3 photochemical *
3.18 Tunnelling
3.19 Electron transfer
3.20 Positron annihilation *
3.21 Ionization (including Rydberg states)
3.22 Molecular motion (including diffusive) *
3.23 Isotopic effects *
3.24 Fluctuations and noise
3.25 Collective motion and excitations *
3.26 Surface effects and catalysis
3.27 Thermodynamic and transport properties
3.28 Structure of solids and liquids
3.29 Critical phenomena *
3.30 Phase transitions *

SUBJECT INDEX TO VOLUME 115

METHODS

Theoretical

Group theory and algebras

IR dissociation of ammonia clusters, M. Snels, R. Fantoni, R. Sanders and W.L. Meerts 115 (1987) 79
Symmetry properties of the Mueller matrix, A. Schönhofer and H.-G. Kuball 115 (1987) 159

Many body and quasiparticle approaches

The radiative lifetime of the $A\,^1\Pi$ state of BH, G.H.F. Diercksen, N.E. Grüner, J.R. Sabin and J. Oddershede 115 (1987) 15
An extended-valence MC SCF procedure: determination of the dissociation energies of C_2, N_2, O_2, and F_2, M.V. Rama Krishna and K.D. Jordan 115 (1987) 405
Theoretical study of the energetics of the $O_3(X\,^1A_1) \rightarrow O_2(X\,^3\Sigma_g^-) + O(^3P)$ dissociation process, M.V. Rama Krishna and K.D. Jordan 115 (1987) 423

Coupling schemes and perturbative treatments

Effective hamiltonian theory: an intermediate representation method for the wave operator calculation, G. Jolicard 115 (1987) 57
Non-perturbative theory of four-wave light scattering in strong fields, P.F. Fracassi, L. Angeloni and R.G. Della Valle 115 (1987) 169
On the excess-energy dependence of radiationless decay rate constants, A.L. Sobolewski 115 (1987) 469

Relativistic quantum mechanics

VUV and photoelectron spectra of methylstannane. Theoretical and experimental approach, G. Lespes, J. Fernandez and A. Dargelos 115 (1987) 453

Transport quantum mechanics

On the early charge separation and recombination processes in bacterial reaction centers, S.F. Fischer and P.O.J. Scherer 115 (1987) 151

Non-equilibrium thermodynamic and hydrodynamic theories

Reliability of the usual differential collision operator in describing the relaxation of a heavy-particle flow in a light gas, L. Ferrari 115 (1987) 187
The effects of friction on the electron transfer of 9,10-diacyanoanthracene, D. Statman, M. Kovner and J.C. Shea 115 (1987) 197

Ab initio schemes for stationary properties

The radiative lifetime of the $A\,^1\Pi$ state of BH, G.H.F. Diercksen, N.E. Grüner, J.R. Sabin and J. Oddershede 115 (1987) 15

Bond functions in molecular excited states: MRD CI calculations for the $A\,^3\Sigma_u^+$, $B\,^3\Pi_g$ and $W\,^3\Delta_u$ states of N_2, J.S. Wright, V.J. Barclay and R.J. Buenker 115 (1987) 23
On the stabilities of the singly and doubly negative atomic ions of Si, P, S, and Cl, J. Kalcher 115 (1987) 33
A self-consistent reaction field approach to liquid photoionization, H. Ågren, C. Medina Llanos and K.V. Mikkelsen 115 (1987) 43
^{14}N nuclear quadrupole coupling in imidazolium cations. Ab initio studies of urocanic acid, histidinium chloride and imidazolium hydrogen maleate, and comparison with experiment, M.H. Palmer 115 (1987) 207
^{14}N nuclear quadrupole coupling in cyclic amides and thioamides. Ab initio simulations of the solid state environment as interpretation of the NQR spectra of 2-pyridinone, isatin and benzothiazole-2-one. A new X-ray structure for isatin, M.H. Palmer, A.J. Blake and R.O. Gould 115 (1987) 219
Ab initio quantum chemical studies of the electronic properties of the hydrogen bonded N_2–HF, N_2–HCl, $(HCN)_2$ and NH_3–HCN complexes, P.L. Cummins, G.B. Bacskay and N.S. Hush 115 (1987) 325
An extended-valence MC SCF procedure: determination of the dissociation energies of C_2, N_2, O_2, and F_2, M.V. Rama Krishna and K.D. Jordan 115 (1987) 405
Theoretical study of the energetics of the $O_3(X\,^1A_1) \rightarrow O_2(X\,^3\Sigma_g^-) + O(^3P)$ dissociation process, M.V. Rama Krishna and K.D. Jordan 115 (1987) 423
Inner shell excitation of SO_2 by high-energy electron impact: a comparison with multichannel quantum defect theory, K.-H. Sze, C.E. Brion, X.-M. Tong and J.-M. Li 115 (1987) 433
Sensitivity of monomer nuclear quadrupole coupling constants to hydrogen bond formation, S. Liu and C.E. Dykstra 115 (1987) 461

Computational and simulation methods

Study of rotational relaxation fitting laws from calculation of SRS N_2 Q-branch, B. Lavorel, G. Millot, J. Bonamy and D. Robert 115 (1987) 69
Laser fragmentation of solids, G.D. Billing 115 (1987) 229
Atom–molecule scattering with the average wavefunction method, H. Singh, D.K. Dacol and H.Rabitz 115 (1987) 339
Tunneling in the presence of fluctuations: the stochastic Liouville equation approach, A. Lami and G. Villani 115 (1987) 391

Molecular dynamics and scattering theory

Symmetry properties of the Mueller matrix, A. Schönhofer and H.-G. Kuball 115 (1987) 159
Atom–molecule scattering with the average wavefunction method, H. Singh, D.K. Dacol and H.Rabitz 115 (1987) 339
Theoretical investigations of the momentum densities for molecular hydrogen, M. Defranceschi 115 (1987) 349
Ionisation of small molecules by state-selected $Ne(^3P_0, ^3P_2)$ metastable atoms in the $0.06 < E < 6$ eV energy range, F.T.M. van den Berg, J.H.M. Schonenberg and H.C.W. Beijerinck 115 (1987) 359
Tunneling in the presence of fluctuations: the stochastic Liouville equation approach, A. Lami and G. Villani 115 (1987) 391
Enhancement of reactivity through near-resonant radiative excitation of an overtone: model study of an isomerization by hydrogen tunneling, A. Lami 115 (1987) 399

Experimental

Magnetic resonances
^{14}N nuclear quadrupole coupling in imidazolium cations. Ab initio studies of urocanic acid, histidinium chloride and imidazolium hydrogen maleate, and comparison with experiment, M.H. Palmer 115 (1987) 207
^{14}N nuclear quadrupole coupling in cyclic amides and thioamides. Ab initio simulations of the solid state environment as interpretation of the NQR spectra of 2-pyridinone, isatin and benzothiazole-2-one. A new X-ray structure for isatin, M.H. Palmer, A.J. Blake and R.O. Gould 115 (1987) 219

Microwave spectroscopy
Rotational spectrum and ring-puckering vibration in 2,5-dihydrofuran, R.M. Villamañán, J.C. López and J.L. Alonso 115 (1987) 103
Ab initio quantum chemical studies of the electronic properties of the hydrogen bonded N_2–HF, N_2–HCl, $(HCN)_2$ and NH_3–HCN complexes, P.L. Cummins, G.B. Bacskay and N.S. Hush 115 (1987) 325
Sensitivity of monomer nuclear quadrupole coupling constants to hydrogen bond formation, S. Liu and C.E. Dykstra 115 (1987) 461

Infrared spectroscopy
IR dissociation of ammonia clusters, M. Snels, R. Fantoni, R. Sanders and W.L. Meerts 115 (1987) 79

Raman spectroscopy
Study of rotational relaxation fitting laws from calculation of SRS N_2 Q-branch, B. Lavorel, G. Millot, J. Bonamy and D. Robert 115 (1987) 69

Visible and UV spectroscopy
Observation of delocalized states of the proton in carboxylic acid dimers in condensed matter, R.M. Hochstrasser and H.P. Trommsdorff 115 (1987) 1
Two-color photoionization spectroscopy of polyatomic molecules and cations: aniline, phenol and phenetole, J. Lemaire, I. Dimicoli, F. Piuzzi and R. Botter 115 (1987) 119
Laser-induced dissociation of phenetole ions prepared by resonance-enhanced two-photon, two-color ionization, J. Lemaire, I. Dimicoli and R. Botter 115 (1987) 129
Concentration-dependent absorption and emission behaviour of a pyrimidonecarbocyanine dye in hexafluoroisopropanol, A. Penzkofer, W. Leupacher, B. Meier, B. Runde and K.H. Drexhage 115 (1987) 143
VUV and photoelectron spectra of methylstannane. Theoretical and experimental approach, G. Lespes, J. Fernandez and A. Dargelos 115 (1987) 453

Fluorescence spectroscopy
Observation of delocalized states of the proton in carboxylic acid dimers in condensed matter, R.M. Hochstrasser and H.P. Trommsdorff 115 (1987) 1
Concentration-dependent absorption and emission behaviour of a pyrimidonecarbocyanine dye in hexafluoroisopropanol, A. Penzkofer, W. Leupacher, B. Meier, B. Runde and K.H. Drexhage 115 (1987) 143
The effects of friction on the electron transfer of 9,10-diacyanoanthracene, D. Statman, M. Kovner and J.C. Shea 115 (1987) 197

Photoelectron and Auger spectroscopy
A self-consistent reaction field approach to liquid photoionization, H. Ågren, C. Medina Llanos and K.V. Mikkelsen 115 (1987) 43
HeIα photoionisation cross section determination of Br atoms, W.J. van der Meer, P. van der Meulen and C.A. de Lange 115 (1987) 109
Electronic autoionization in carbon monoxide: the effects of the vibrational motion, B. Leyh, J. Delwiche, M.-J. Hubin-Franskin and I. Nenner 115 (1987) 243
Electron correlation effects in the valence shell photoelectron spectra of haloethenes, A.W. Potts, J.M. Benson, I. Novak and W.A. Svensson 115 (1987) 253
A study of the phenyl radical by vacuum ultraviolet photoelectron spectroscopy, V. Butcher, M.L. Costa, J.M. Dyke, A.R. Ellis and A. Morris 115 (1987) 261
Reevaluation of electronic polarization energies in organic crystals, N. Sato, H. Inokuchi and E.A. Silinsh 115 (1987) 269

X-ray spectroscopy
Sulfur and chlorine K-shell X-ray absorption spectra of SCl_2, S_2Cl_2,$SOCl_2$ and SO_2Cl_2, A.P. Hitchcock, S. Bodeur and M. Tronc 115 (1987) 93

Electron impact spectroscopy
Inner shell excitation of SO_2 by high-energy electron impact: a comparison with multichannel quantum defect theory, K.-H. Sze, C.E. Brion, X.-M. Tong and J.-M. Li 115 (1987) 433

Laser methods
Observation of delocalized states of the proton in carboxylic acid dimers in condensed matter, R.M. Hochstrasser and H.P. Trommsdorff 115 (1987) 1
Non-resonant VV transfer in liquid Ar and in the gas phase at 85 K, H.T. Williams, M.H. Purvis and C.J.S.M. Simpson 115 (1987) 7
Two-color photoionization spectroscopy of polyatomic molecules and cations: aniline, phenol and phenetole, J. Lemaire, I. Dimicoli, F. Piuzzi and R. Botter 115 (1987) 119
Laser-induced dissociation of phenetole ions prepared by resonance-enhanced two-photon, two-color ionization, J. Lemaire, I. Dimicoli and R. Botter 115 (1987) 129
Kinetics of excitation and charge transfer reactions in non-polar media, O. Brede, R. Mehnert and W. Naumann 115 (1987) 279
Rotational distribution of H_2^+ ions produced by 90 eV electron impact, W. Koot, W.J. van der Zande and D.P. de Bruijn 115 (1987) 297

Synchrotron spectroscopies
Sulfur and chlorine K-shell X-ray absorption spectra of SCl_2, S_2Cl_2,$SOCl_2$ and SO_2Cl_2, A.P. Hitchcock, S. Bodeur and M. Tronc 115 (1987) 93
Electronic autoionization in carbon monoxide: the effects of the vibrational motion, B. Leyh, J. Delwiche, M.-J. Hubin-Franskin and I. Nenner 115 (1987) 243
Electron correlation effects in the valence shell photoelectron spectra of haloethenes, A.W. Potts, J.M. Benson, I. Novak and W.A. Svensson 115 (1987) 253
Field-assisted photodesorption of He, Ne, Ar, Kr and CO ions from W , S. Jaenicke, U. Weigmann, J.R. Pitts, W. Drachsel, J.H. Block and D. Menzel 115 (1987) 381

Optical pumping
Ionisation of small molecules by state-selected Ne($^3P_0$, $^3P_2$) metastable atoms in the $0.06 < E < 6$ eV energy range, F.T.M. van den Berg, J.H.M. Schonenberg and H.C.W. Beijerinck 115 (1987) 359

Atomic and molecular beam techniques
IR dissociation of ammonia clusters, M. Snels, R. Fantoni, R. Sanders and W.L. Meerts 115 (1987) 79
Two-color photoionization spectroscopy of polyatomic molecules and cations: aniline, phenol and phenetole, J. Lemaire, I. Dimicoli, F. Piuzzi and R. Botter 115 (1987) 119
Laser-induced dissociation of phenetole ions prepared by resonance-enhanced two-photon, two-color ionization, J. Lemaire, I. Dimicoli and R. Botter 115 (1987) 129
Rotational distribution of H_2^+ ions produced by 90 eV electron impact, W. Koot, W.J. van der Zande and D.P. de Bruijn 115 (1987) 297
Ionisation of small molecules by state-selected Ne($^3P_0$, $^3P_2$) metastable atoms in the $0.06 < E < 6$ eV energy range, F.T.M. van den Berg, J.H.M. Schonenberg and H.C.W. Beijerinck 115 (1987) 359

Time-resolved experiments
Non-resonant VV transfer in liquid Ar and in the gas phase at 85 K, H.T. Williams, M.H. Purvis and C.J.S.M. Simpson 115 (1987) 7

Mass spectrometry
Two-color photoionization spectroscopy of polyatomic molecules and cations: aniline, phenol and phenetole, J. Lemaire, I. Dimicoli, F. Piuzzi and R. Botter 115 (1987) 119
Laser-induced dissociation of phenetole ions prepared by resonance-enhanced two-photon, two-color ionization, J. Lemaire, I. Dimicoli and R. Botter 115 (1987) 129
Field-assisted photodesorption of He, Ne, Ar, Kr and CO ions from W , S. Jaenicke, U. Weigmann, J.R. Pitts, W. Drachsel, J.H. Block and D. Menzel 115 (1987) 381

Radiolysis
Kinetics of excitation and charge transfer reactions in non-polar media, O. Brede, R. Mehnert and W. Naumann 115 (1987) 279

X-ray, electron and neutron diffraction
^{14}N nuclear quadrupole coupling in imidazolium cations. Ab initio studies of urocanic acid, histidinium chloride and imidazolium hydrogen maleate, and comparison with experiment, M.H. Palmer 115 (1987) 207
^{14}N nuclear quadrupole coupling in cyclic amides and thioamides. Ab initio simulations of the solid state environment as interpretation of the NQR spectra of 2-pyridinone, isatin and benzothiazole-2-one. A new X-ray structure for isatin, M.H. Palmer, A.J. Blake and R.O. Gould 115 (1987) 219
Theoretical investigations of the momentum densities for molecular hydrogen, M. Defranceschi 115 (1987) 349

Field emission and field ionization
Field-assisted photodesorption of He, Ne, Ar, Kr and CO ions from W , S. Jaenicke, U. Weigmann, J.R. Pitts, W. Drachsel, J.H. Block and D. Menzel 115 (1987) 381

Measurement of macroscopic variables
Hydroxyls in polyethylene and in alkanes. A low-temperature dielectric relaxation study, J. le G. Gilchrist 115 (1987) 307
Dielectric absorption in hydrocarbon polymers with non-polar additives, J. le G. Gilchrist and J.K. Vij 115 (1987) 319

OBJECTS

Bulk systems

Gases
Non-resonant VV transfer in liquid Ar and in the gas phase at 85 K, H.T. Williams, M.H. Purvis and C.J.S.M. Simpson 115 (1987) 7
HeIα photoionisation cross section determination of Br atoms, W.J. van der Meer, P. van der Meulen and C.A. de Lange 115 (1987) 109
Reliability of the usual differential collision operator in describing the relaxation of a heavy-particle flow in a light gas, L. Ferrari 115 (1987) 187
A study of the phenyl radical by vacuum ultraviolet photoelectron spectroscopy, V. Butcher, M.L. Costa, J.M. Dyke, A.R. Ellis and A. Morris 115 (1987) 261
Atom–molecule scattering with the average wavefunction method, H. Singh, D.K. Dacol and H.Rabitz 115 (1987) 339
VUV and photoelectron spectra of methylstannane. Theoretical and experimental approach, G. Lespes, J. Fernandez and A. Dargelos 115 (1987) 453

Liquid mixtures and solutions
Non-resonant VV transfer in liquid Ar and in the gas phase at 85 K, H.T. Williams, M.H. Purvis and C.J.S.M. Simpson 115 (1987) 7
A self-consistent reaction field approach to liquid photoionization, H. Ågren, C. Medina Llanos and K.V. Mikkelsen 115 (1987) 43
Concentration-dependent absorption and emission behaviour of a pyrimidonecarbocyanine dye in hexafluoroisopropanol, A. Penzkofer, W. Leupacher, B. Meier, B. Runde and K.H. Drexhage 115 (1987) 143
Symmetry properties of the Mueller matrix, A. Schönhofer and H.-G. Kuball 115 (1987) 159
The effects of friction on the electron transfer of 9,10-diacyanoanthracene, D. Statman, M. Kovner and J.C. Shea 115 (1987) 197
Kinetics of excitation and charge transfer reactions in non-polar media, O. Brede, R. Mehnert and W. Naumann 115 (1987) 279

Crystals
Laser fragmentation of solids, G.D. Billing 115 (1987) 229

–neat
Calculation of the elastic constants of phenanthrene crystals, R. Kulver, K.-H. Brose and C.J. Eckhardt 115 (1987) 239
Reevaluation of electronic polarization energies in organic crystals, N. Sato, H. Inokuchi and E.A. Silinsh 115 (1987) 269

Liquid crystals
Symmetry properties of the Mueller matrix, A. Schönhofer and H.-G. Kuball 115 (1987) 159

Polymers
Hydroxyls in polyethylene and in alkanes. A low-temperature dielectric relaxation study, J. le G. Gilchrist 115 (1987) 307
Dielectric absorption in hydrocarbon polymers with non-polar additives, J. le G. Gilchrist and J.K. Vij 115 (1987) 319

Dielectrics
Hydroxyls in polyethylene and in alkanes. A low-temperature dielectric relaxation study, J. le G. Gilchrist 115 (1987) 307
Dielectric absorption in hydrocarbon polymers with non-polar additives, J. le G. Gilchrist and J.K. Vij 115 (1987) 319

Microscopic systems

Atoms
On the stabilities of the singly and doubly negative atomic ions of Si, P, S, and Cl, J. Kalcher 115 (1987) 33
HeIα photoionisation cross section determination of Br atoms, W.J. van der Meer, P. van der Meulen and C.A. de Lange 115 (1987) 109

Molecules (neutral and ionic)
Effective hamiltonian theory: an intermediate representation method for the wave operator calculation, G. Jolicard 115 (1987) 57
The effects of friction on the electron transfer of 9,10-diacyanoanthracene, D. Statman, M. Kovner and J.C. Shea 115 (1987) 197
Ionisation of small molecules by state-selected Ne($^3P_0$, $^3P_2$) metastable atoms in the $0.06 < E < 6$ eV energy range, F.T.M. van den Berg, J.H.M. Schonenberg and H.C.W. Beijerinck 115 (1987) 359
On the excess-energy dependence of radiationless decay rate constants, A.L. Sobolewski 115 (1987) 469

– diatomic
The radiative lifetime of the $A\,^1\Pi$ state of BH, G.H.F. Diercksen, N.E. Grüner, J.R. Sabin and J. Oddershede 115 (1987) 15
Bond functions in molecular excited states: MRD CI calculations for the $A\,^3\Sigma_u^+$, $B\,^3\Pi_g$ and $W\,^3\Delta_u$ states of N_2, J.S. Wright, V.J. Barclay and R.J. Buenker 115 (1987) 23
Study of rotational relaxation fitting laws from calculation of SRS N_2 Q-branch, B. Lavorel, G. Millot, J. Bonamy and D. Robert 115 (1987) 69
Electronic autoionization in carbon monoxide: the effects of the vibrational motion, B. Leyh, J. Delwiche, M.-J. Hubin-Franskin and I. Nenner 115 (1987) 243
Rotational distribution of H_2^+ ions produced by 90 eV electron impact, W. Koot, W.J. van der Zande and D.P. de Bruijn 115 (1987) 297
Atom–molecule scattering with the average wavefunction method, H. Singh, D.K. Dacol and H.Rabitz 115 (1987) 339
Theoretical investigations of the momentum densities for molecular hydrogen, M. Defranceschi 115 (1987) 349
An extended-valence MC SCF procedure: determination of the dissociation energies of C_2, N_2, O_2, and F_2, M.V. Rama Krishna and K.D. Jordan 115 (1987) 405

– small polyatomics
Sulfur and chlorine K-shell X-ray absorption spectra of SCl_2, S_2Cl_2,$SOCl_2$ and SO_2Cl_2, A.P. Hitchcock, S. Bodeur and M. Tronc 115 (1987) 93
Theoretical study of the energetics of the $O_3(X\,^1A_1) \rightarrow O_2(X\,^3\Sigma_g^-) + O(^3P)$ dissociation process, M.V. Rama Krishna and K.D. Jordan 115 (1987) 423
Inner shell excitation of SO_2 by high-energy electron impact: a comparison with multichannel quantum defect theory, K.-H. Sze, C.E. Brion, X.-M. Tong and J.-M. Li 115 (1987) 433
VUV and photoelectron spectra of methylstannane. Theoretical and experimental approach, G. Lespes, J. Fernandez and A. Dargelos 115 (1987) 453

– aromatics
Concentration-dependent absorption and emission behaviour of a pyrimidonecarbocyanine dye in hexafluoroisopropanol, A. Penzkofer, W. Leupacher, B. Meier, B. Runde and K.H. Drexhage 115 (1987) 143
Calculation of the elastic constants of phenanthrene crystals, R. Kulver, K.-H. Brose and C.J. Eckhardt 115 (1987) 239

– other large
Enhancement of reactivity through near-resonant radiative excitation of an overtone: model study of an isomerization by hydrogen tunneling, A. Lami 115 (1987) 399

Molecular aggregates
Sensitivity of monomer nuclear quadrupole coupling constants to hydrogen bond formation, S. Liu and C.E. Dykstra 115 (1987) 461

– dimers
Concentration-dependent absorption and emission behaviour of a pyrimidonecarbocyanine dye in hexafluoroisopropanol, A. Penzkofer, W. Leupacher, B. Meier, B. Runde and K.H. Drexhage 115 (1987) 143
On the early charge separation and recombination processes in bacterial reaction centers, S.F. Fischer and P.O.J. Scherer 115 (1987) 151
Ab initio quantum chemical studies of the electronic properties of the hydrogen bonded N_2–HF, N_2–HCl, $(HCN)_2$ and NH_3–HCN complexes, P.L. Cummins, G.B. Bacskay and N.S. Hush 115 (1987) 325

– van der Waals molecules
IR dissociation of ammonia clusters, M. Snels, R. Fantoni, R. Sanders and W.L. Meerts 115 (1987) 79
Ab initio quantum chemical studies of the electronic properties of the hydrogen bonded N_2–HF, N_2–HCl, $(HCN)_2$ and NH_3–HCN complexes, P.L. Cummins, G.B. Bacskay and N.S. Hush 115 (1987) 325
Sensitivity of monomer nuclear quadrupole coupling constants to hydrogen bond formation, S. Liu and C.E. Dykstra 115 (1987) 461

Free radicals (including hydronium and muonium)
A study of the phenyl radical by vacuum ultraviolet photoelectron spectroscopy, V. Butcher, M.L. Costa, J.M. Dyke, A.R. Ellis and A. Morris 115 (1987) 261

Ions and charge carriers
A self-consistent reaction field approach to liquid photoionization, H. Ågren, C. Medina Llanos and K.V. Mikkelsen 115 (1987) 43
A study of the phenyl radical by vacuum ultraviolet photoelectron spectroscopy, V. Butcher, M.L. Costa, J.M. Dyke, A.R. Ellis and A. Morris 115 (1987) 261

PHENOMENA

Molecular structure
Rotational spectrum and ring-puckering vibration in 2,5-dihydrofuran, R.M. Villamañán, J.C. López and J.L. Alonso 115 (1987) 103
^{14}N nuclear quadrupole coupling in imidazolium cations. Ab initio studies of urocanic acid, histidinium chloride and imidazolium hydrogen maleate, and comparison with experiment, M.H. Palmer 115 (1987) 207
^{14}N nuclear quadrupole coupling in cyclic amides and thioamides. Ab initio simulations of the solid state environment as interpretation of the NQR spectra of 2-pyridinone, isatin and benzothiazole-2-one. A new X-ray structure for isatin, M.H. Palmer, A.J. Blake and R.O. Gould 115 (1987) 219

Vibrations and rotations of molecules
Bond functions in molecular excited states: MRD CI calculations for the $A\,^3\Sigma_u^+$, $B\,^3\Pi_g$ and $W\,^3\Delta_u$ states of N_2, J.S. Wright, V.J. Barclay and R.J. Buenker 115 (1987) 23
Rotational spectrum and ring-puckering vibration in 2,5-dihydrofuran, R.M. Villamañán, J.C. López and J.L. Alonso 115 (1987) 103
Rotational distribution of H_2^+ ions produced by 90 eV electron impact, W. Koot, W.J. van der Zande and D.P. de Bruijn 115 (1987) 297
Hydroxyls in polyethylene and in alkanes. A low-temperature dielectric relaxation study, J. le G. Gilchrist 115 (1987) 307
Dielectric absorption in hydrocarbon polymers with non-polar additives, J. le G. Gilchrist and J.K. Vij 115 (1987) 319
Enhancement of reactivity through near-resonant radiative excitation of an overtone: model study of an isomerization by hydrogen tunneling, A. Lami 115 (1987) 399

Electronic structure and states
The radiative lifetime of the $A\,^1\Pi$ state of BH, G.H.F. Diercksen, N.E. Grüner, J.R. Sabin and J. Oddershede 115 (1987) 15
Bond functions in molecular excited states: MRD CI calculations for the $A\,^3\Sigma_u^+$, $B\,^3\Pi_g$ and $W\,^3\Delta_u$ states of N_2, J.S. Wright, V.J. Barclay and R.J. Buenker 115 (1987) 23
On the stabilities of the singly and doubly negative atomic ions of Si, P, S, and Cl, J. Kalcher 115 (1987) 33
Sulfur and chlorine K-shell X-ray absorption spectra of SCl_2, S_2Cl_2,$SOCl_2$ and SO_2Cl_2, A.P. Hitchcock, S. Bodeur and M. Tronc 115 (1987) 93
^{14}N nuclear quadrupole coupling in imidazolium cations. Ab initio studies of urocanic acid, histidinium chloride and imidazolium hydrogen maleate, and comparison with experiment, M.H. Palmer 115 (1987) 207
^{14}N nuclear quadrupole coupling in cyclic amides and thioamides. Ab initio simulations of the solid state environment as interpretation of the NQR spectra of 2-pyridinone, isatin and benzothiazole-2-one. A new X-ray structure for isatin, M.H. Palmer, A.J. Blake and R.O. Gould 115 (1987) 219

Electron correlation effects in the valence shell photoelectron spectra of haloethenes, A.W. Potts, J.M. Benson, I. Novak and W.A. Svensson 115 (1987) 253
Reevaluation of electronic polarization energies in organic crystals, N. Sato, H. Inokuchi and E.A. Silinsh 115 (1987) 269
Theoretical investigations of the momentum densities for molecular hydrogen, M. Defranceschi 115 (1987) 349
An extended-valence MC SCF procedure: determination of the dissociation energies of C_2, N_2, O_2, and F_2, M.V. Rama Krishna and K.D. Jordan 115 (1987) 405
Theoretical study of the energetics of the $O_3(X\,^1A_1) \rightarrow O_2(X\,^3\Sigma_g^-) + O(^3P)$ dissociation process, M.V. Rama Krishna and K.D. Jordan 115 (1987) 423
Inner shell excitation of SO_2 by high-energy electron impact: a comparison with multichannel quantum defect theory, K.-H. Sze, C.E. Brion, X.-M. Tong and J.-M. Li 115 (1987) 433
VUV and photoelectron spectra of methylstannane. Theoretical and experimental approach, G. Lespes, J. Fernandez and A. Dargelos 115 (1987) 453

Electric and magnetic properties
Ab initio quantum chemical studies of the electronic properties of the hydrogen bonded N_2–HF, N_2–HCl, $(HCN)_2$ and NH_3–HCN complexes, P.L. Cummins, G.B. Bacskay and N.S. Hush 115 (1987) 325

Optical activity
Symmetry properties of the Mueller matrix, A. Schönhofer and H.-G. Kuball 115 (1987) 159

Molecular interactions
On the early charge separation and recombination processes in bacterial reaction centers, S.F. Fischer and P.O.J. Scherer 115 (1987) 151
Calculation of the elastic constants of phenanthrene crystals, R. Kulver, K.-H. Brose and C.J. Eckhardt 115 (1987) 239
Atom–molecule scattering with the average wavefunction method, H. Singh, D.K. Dacol and H.Rabitz 115 (1987) 339
Sensitivity of monomer nuclear quadrupole coupling constants to hydrogen bond formation, S. Liu and C.E. Dykstra 115 (1987) 461

Spectral bandshapes and intensities
Study of rotational relaxation fitting laws from calculation of SRS N_2 Q-branch, B. Lavorel, G. Millot, J. Bonamy and D. Robert 115 (1987) 69
Concentration-dependent absorption and emission behaviour of a pyrimidonecarbocyanine dye in hexafluoroisopropanol, A. Penzkofer, W. Leupacher, B. Meier, B. Runde and K.H. Drexhage 115 (1987) 143
Non-perturbative theory of four-wave light scattering in strong fields, P.F. Fracassi, L. Angeloni and R.G. Della Valle 115 (1987) 169
Inner shell excitation of SO_2 by high-energy electron impact: a comparison with multichannel quantum defect theory, K.-H. Sze, C.E. Brion, X.-M. Tong and J.-M. Li 115 (1987) 433

Coupling of electronic and nuclear motion
On the excess-energy dependence of radiationless decay rate constants, A.L. Sobolewski 115 (1987) 469

Energy transfer processes
Non-resonant VV transfer in liquid Ar and in the gas phase at 85 K, H.T. Williams, M.H. Purvis and C.J.S.M. Simpson 115 (1987) 7
On the early charge separation and recombination processes in bacterial reaction centers, S.F. Fischer and P.O.J. Scherer 115 (1987) 151
Kinetics of excitation and charge transfer reactions in non-polar media, O. Brede, R. Mehnert and W. Naumann 115 (1987) 279
Field-assisted photodesorption of He, Ne, Ar, Kr and CO ions from W , S. Jaenicke, U. Weigmann, J.R. Pitts, W. Drachsel, J.H. Block and D. Menzel 115 (1987) 381

Molecular photophysical processes
The radiative lifetime of the $A\,^1\Pi$ state of BH, G.H.F. Diercksen, N.E. Grüner, J.R. Sabin and J. Oddershede 115 (1987) 15
Field-assisted photodesorption of He, Ne, Ar, Kr and CO ions from W , S. Jaenicke, U. Weigmann, J.R. Pitts, W. Drachsel, J.H. Block and D. Menzel 115 (1987) 381

Intramolecular dynamics
On the excess-energy dependence of radiationless decay rate constants, A.L. Sobolewski 115 (1987) 469

– vibrational energy redistribution (including vibrational dissociation)
IR dissociation of ammonia clusters, M. Snels, R. Fantoni, R. Sanders and W.L. Meerts 115 (1987) 79
Enhancement of reactivity through near-resonant radiative excitation of an overtone: model study of an isomerization by hydrogen tunneling, A. Lami 115 (1987) 399

Luminescence spectra, yields and lifetimes
Concentration-dependent absorption and emission behaviour of a pyrimidonecarbocyanine dye in hexafluoroisopropanol, A. Penzkofer, W. Leupacher, B. Meier, B. Runde and K.H. Drexhage 115 (1987) 143

Non-linear responses (including optical)
Non-perturbative theory of four-wave light scattering in strong fields, P.F. Fracassi, L. Angeloni and R.G. Della Valle 115 (1987) 169

Tunnelling
Tunneling in the presence of fluctuations: the stochastic Liouville equation approach, A. Lami and G. Villani 115 (1987) 391
Enhancement of reactivity through near-resonant radiative excitation of an overtone: model study of an isomerization by hydrogen tunneling, A. Lami 115 (1987) 399

Electron transfer
On the early charge separation and recombination processes in bacterial reaction centers, S.F. Fischer and P.O.J. Scherer 115 (1987) 151
The effects of friction on the electron transfer of 9,10-diacyanoanthracene, D. Statman, M. Kovner and J.C. Shea 115 (1987) 197
Kinetics of excitation and charge transfer reactions in non-polar media, O. Brede, R. Mehnert and W. Naumann 115 (1987) 279

Ionization (including Rydberg states)
HeIα photoionisation cross section determination of Br atoms, W.J. van der Meer, P. van der Meulen and C.A. de Lange 115 (1987) 109
Electronic autoionization in carbon monoxide: the effects of the vibrational motion, B. Leyh, J. Delwiche, M.-J. Hubin-Franskin and I. Nenner 115 (1987) 243
Electron correlation effects in the valence shell photoelectron spectra of haloethenes, A.W. Potts, J.M. Benson, I. Novak and W.A. Svensson 115 (1987) 253
A study of the phenyl radical by vacuum ultraviolet photoelectron spectroscopy, V. Butcher, M.L. Costa, J.M. Dyke, A.R. Ellis and A. Morris 115 (1987) 261
Reevaluation of electronic polarization energies in organic crystals, N. Sato, H. Inokuchi and E.A. Silinsh 115 (1987) 269
Rotational distribution of H_2^+ ions produced by 90 eV electron impact, W. Koot, W.J. van der Zande and D.P. de Bruijn 115 (1987) 297
Ionisation of small molecules by state-selected Ne($^3P_0$, $^3P_2$) metastable atoms in the $0.06 < E < 6$ eV energy range, F.T.M. van den Berg, J.H.M. Schonenberg and H.C.W. Beijerinck 115 (1987) 359

Fluctuations and noise
Tunneling in the presence of fluctuations: the stochastic Liouville equation approach, A. Lami and G. Villani 115 (1987) 391

Surface effects and catalysis
Laser fragmentation of solids, G.D. Billing 115 (1987) 229

Thermodynamic and transport properties
Reliability of the usual differential collision operator in describing the relaxation of a heavy-particle flow in a light gas, L. Ferrari 115 (1987) 187
Calculation of the elastic constants of phenanthrene crystals, R. Kulver, K.-H. Brose and C.J. Eckhardt 115 (1987) 239

Structure of solids and liquids
Calculation of the elastic constants of phenanthrene crystals, R. Kulver, K.-H. Brose and C.J. Eckhardt 115 (1987) 239